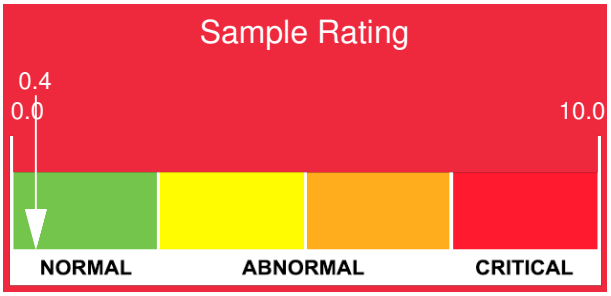
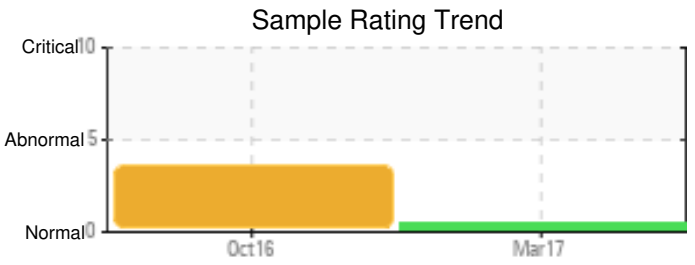
PETRO-CANADA LUBRICANTS





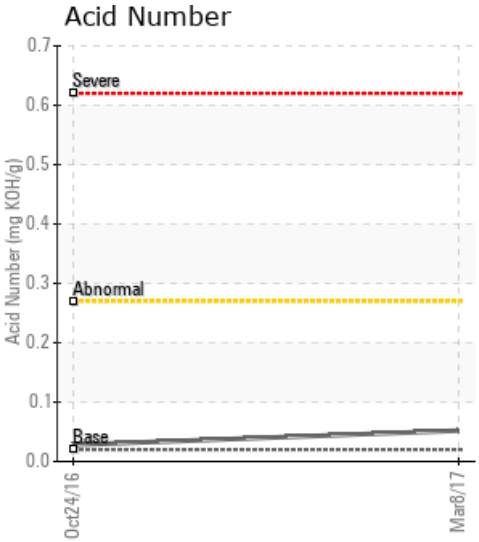
LINE 26 BOILER 2

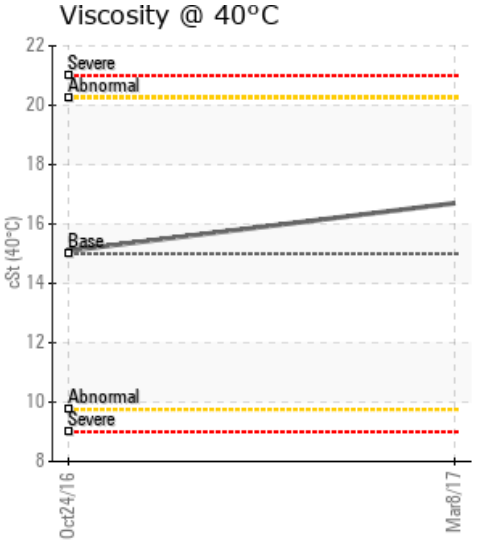
Customer: PTRHTF10179	System Information	Sample Information
SHAW INDUSTRIES PLANT SI 12454 NORTH US HWY 27 CHICKAMAUGA, GA 30707 USA Attn: Randy Visage Tel: (706)375-3121 E-Mail: randy.visage@shawinc.com	System Volume: 250 gal Bulk Operating Temp: 450F / 232C Heating Source: Blanket: Fluid: COASTAL THERMALANE 800 Make:	Lab No: 02132749 Analyst: Manny Garcia Sample Date: 03/08/17 Received Date: 03/15/17 Completed: 03/27/17

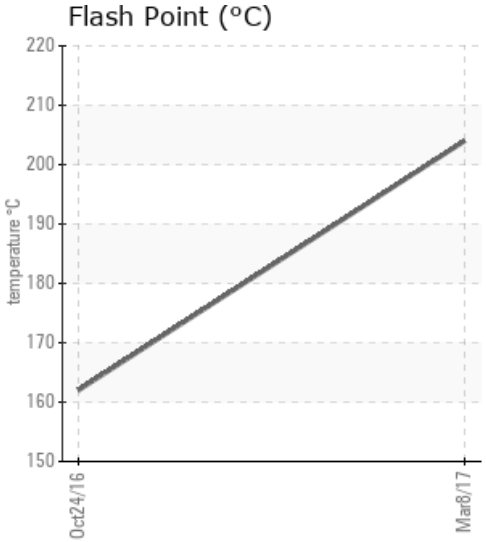
Recommendation: The Clean & Flush of this system was performed satisfactory as all of the lab analysis results are satisfactory. Please move forward with the conversion of the system to Petro-Canada Calflo LT and continue annual fluid analysis samples

Comments: System parameters are satisfactory for all variables.

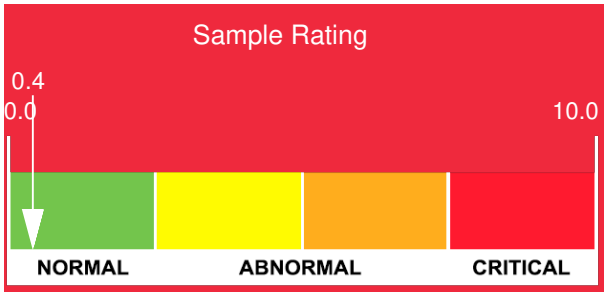
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
03/08/17	03/15/17	3c	FILL LINE	399 / 204	10.5	16.7	0.052	0.043	765 / 407	803 / 429	898 / 481	3.40
10/24/16	11/01/16	0c	FILL LINE	324 / 162	4.1	15.1	0.028	0.078	769 / 410	812 / 434	899 / 482	3.32
Baseline Data				444 / 229		15	0.02		754 / 401		853 / 456	0.0

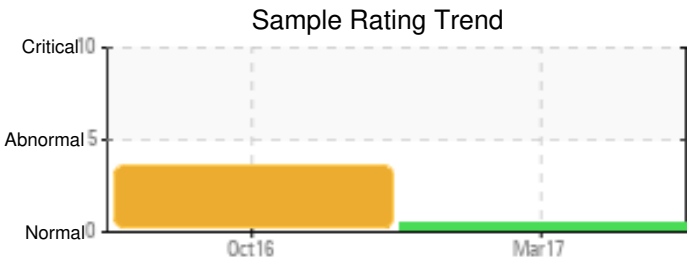






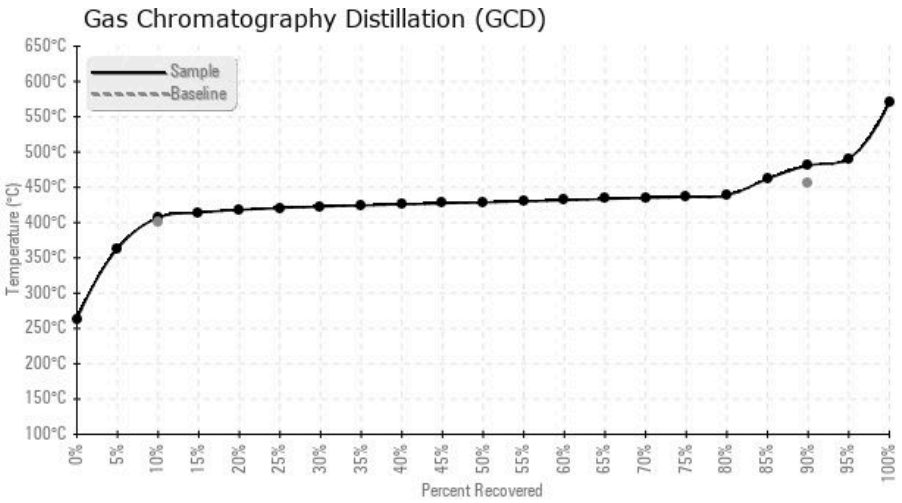
PETRO-CANADA LUBRICANTS

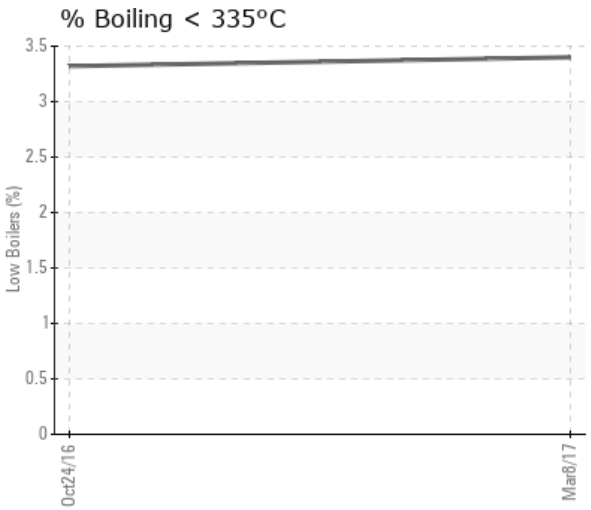




Sample Date	Iron	Chromium	Nickel	Aluminum	Copper	Lead	Tin	Cadmium	Silver	Vanadium	Silicon	Sodium	Potassium	Titanium	Molybdenum	Antimony	Manganese	Lithium	Boron	Magnesium	Calcium	Barium	Phosphorus	Zinc
03/08/17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/24/16	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Baseline Data			0	0						0			0	0					0				0	

Elemental anaysis results (above) in parts per million (ppm). [10,000 ppm = 1.0%]





Historical Comments

10/24/16	Age if the oil must be addressed as decisions are made to modify or change out the system and replace with Petro-Canada Calflo Heat Transfer Fluids. The very low flash point (dangerous) and the 90% distillation curve may be mitigated by 'venting' the system. Fluid must be filtered to clean up the metals/debris. Any maintenance performed on this fluid system should be followed up with a sample to verify improvement.Wear metals are acceptable/Contamination is low/Viscosity is in range/COC Flash Point is severely low and must be addressed asap at 162oC/(GCD) 90% Distillation Point is abnormally high/White metal is moderate as the 100x filter patch shows/Debris is visible